Sablefish, also known as Anoplopoma fimbria, are deep bottom dwelling fish found in the Pacific as far north as the Bering Sea, and as far south as Japan and California, living at depths from 500 to an extreme 3000 feet. Prized for its flavor and texture Sablefish can grow to a length of 3 feet and weigh around 25 pounds. They eat just about anything that they come across such as other fish, squid, krill and jelly fish. Sablefish are sometimes called black cod, but they are not actually a member of the Cod family.

Sablefish are one of the most highly valued fish per pound out of any caught in Alaskan waters. Why is that? Because sablefish have unique qualities not found in other fish AND it tastes really really good. On top of that sablefish live very deep, which makes them difficult to reach. This supports a large commercial fishery that employs hundreds of people and provides you and me the opportunity to eat such an amazing fish. Due to the high demand for Sablefish, the population has to be monitored to ensure that it is not over fished. With careful fishing management put in place based on population estimates, the Sablefish population is considered healthy and stable.

Sablefish lack what is called a swim bladder, basically a little gas bag, which means you can't find them using hydroacoustic techniques as with Walleyed Pollock, Hydroacoustic equipment, finds fish by bouncing soundwaves off their swim bladder. They also live too deep for the NOAA bottom trawl surveys to adequately sample their population. The only effective way to find and count sable fish, is by using Longline gear. Longline gear is basically a rope (called a groundline) a mile or more in length with baited hooks on smaller lengths of line (called a gangion) between two anchors then attached to buoys at each end with buoy lines. One longline can have as many as 7000 hooks on it. Each hook can be baited by hand or by a machine called an autobaiter.

Sablefish are attracted to the baited long line, get hooked, and are then counted as they are brought up to the ship. The Long line gear will sit on the bottom anywhere between 3 to 10 hours before it is retrieved. This is called the “soak time” and is accounted for during estimation. Do you think there would be greater or fewer fish caught with a longer soak time?

The nice thing about estimating sablefish populations is that the research survey to collect samples pays for itself. All the sablefish caught during the survey are kept and sold. Usually, enough money is made to cover the cost of the sampling effort. Did you know? Only commercial fishing vessels are contracted to perfom sablefish research surveys instead of a NOAA vessel? Researchers ride out on the fishing boats to conduct the survey.

Fortunately Long lining has proven a fairly effective means of sampling the sable fish population in its deep water habitat. But one other challenge is harder to deal with… humans aren't the only mammals that find sablefish tasty. Sperm whales also enjoy eating them. Sperm whales are very good at diving, and can easily dive deep enough to reach the depths where sablefish live. They also know how to find the long line gear AND carefully pluck the sable fish off the hook. This method leaves an empty hook, making it appear there are fewer fish to the scientists on the ship.

So how do researchers estimate the portion of sable fish taken by sperm whales? Researchers can detect sperm whales using special microphones that pick up the sound the whales make. The amount of fish caught with sperm whales present are compared to the amount of fish caught when they are not

around. Fortunately the scientists determined that sperm whales only reduce sablefish catches by 1-3%, which is not considerably significant, something which both population researchers and fishermen can be happy about.